

## **REMARKS/ARGUMENTS**

Claims 1-19 remain in this application. Claims 20-37 have been canceled herein.

### **1. Cancellation of Withdrawn Claims 20-37**

Applicant's request that previously withdrawn claims 20-37 be canceled herein.

### **2. Claim Rejections Under 35 USC §102(e)**

Claims 1-3, 5-7, 10-14, and 17-19 are rejected under 35 USC 102(e) as being anticipated by Davies et al., "hereinafter Davies", (US Patent 6,793,728 B1).

Respectfully, the rejection is traversed. Applicant's attorney has again reviewed Davies and wishes to further clarify the difference relative to the present invention. Davies directed to an impermeable and sacrificial primer coating paint layer which includes zinc powder or alloy. The primer paint is for application on a ship's hull for the purpose of protecting the steel hull by promoting a galvanic reaction. The zinc may also form galvanic reaction products (see Col. 4, lines 39-42). This is not a "material exhibiting catalytic activity" as required in claim 1, or a "catalytically active material" as required in claim 13. Catalyst, as defined in Hackh's Chemical Dictionary, 4<sup>th</sup> Edition, is a substance that changes the speed of a reaction, but which is present in its original concentration after the reaction. Accordingly, the form of zinc (whether pure zinc or a zinc alloy) used in US 6,793,728 is not a catalyst, i.e., it does not function as reaction promoter with its concentration remaining unchanged after the reaction. In particular, the only purpose disclosed in Davies for the Zinc is for protecting the steel by a galvanic mechanism. To do so, some portion of the zinc present is sacrificial.

Further, claims 1 and 13 require the material to be "porous." Examiner seems to gloss over this significant limitation. Davies '728 does not teach a porous material. Instead, it teaches that the interstices between the zinc particles be filled to create a solid paint layer (see Col. 5, lines 4-6). Paints, by their very nature are nonporous. They are present to form an impermeable layer which protects the substrate. In fact, if the paint layer were porous, then the function a corrosion inhibitor would be destroyed. In short, if the paint layer were porous, the salt water could penetrate to the steel hull. Accordingly, Davies '728 does not anticipate the claimed invention, as it does not include all the claimed limitations of claim 1 or 13, and, in particular, it does not teach or suggest a *porous coating or mass*. Dependent claims 2-3, 5-7, 10-12, 14 and 17-19 are not anticipated for at least these reasons.

### **3. Claim Rejections Under 35 USC §103**

Claims 4, 8-9, and 15-16 are rejected under 35 USC 103(a) as being unpatentable over Davies et al., "hereinafter Davies", (US Patent 6,793,728 B1) as applied to claims 1-3, 5-7, 10-14, and 17-19, and further in view of Birkenstock et al., "hereinafter Birkenstock", (US Patent 4,407,733).

Birkenstock does nothing to remedy the basic deficiencies of Davies '728. For the reasons stated above, Davies does not teach a either a catalyst or a porous coating or porous solid mass. Instead, Davies teaches a solid protective paint layer including sacrificial zinc or zinc alloy. A person of ordinary skill in the art, posed with the problem of creating an improved catalyst material would not look to Davies, a

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paint, for guidance. It simply offers not suggestion or motivation whatsoever of how to make a highly effective porous catalyst coating. Accordingly, none of the present claims are rendered obvious by the combination of Davies and Birkenstock. Thus, the obviousness rejection should be withdrawn.

#### 4. Conclusion

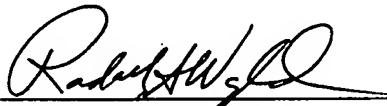
Based upon the above amendments, remarks, and papers of records, Applicants believe the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Applicants believe that no extension of time is necessary to make this Reply timely. Should Applicants be in error, Applicants respectfully request that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Reply timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

Please direct any questions or comments to Randall S. Wayland at 607-974-0463.

Respectfully submitted,

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